CENWS-OD-RG

MEMORANDUM FOR RECORD

Date: 28 December 2005

RE: 200500979, Washington State Dept. of Transportation – SR 509 ditch jurisdictional assessment and approval

PROJECT SUMMARY: The Washington State Dept. of Transportation (WSDOT) proposes to construct an extension from the existing terminus of SR 509 from South 188th Street in SeaTac to I-5. The extension will have six new lanes (two general purpose and one High Occupancy Vehicle (HOV) lane in each direction). The project is located in SeaTac, King County, Washington. This project impacts four jurisdictional wetlands totaling 0.32 acres of fill, one 0.11 acre isolated wetland, work will occur in Des Moines Creek for culvert extensions, and the project runs along a 9.9 mile stretch of highway with approximately 8000 linear feet of roadside ditches, of which 2,087 square feet (0.05 acres) are jurisdictional.

MFR PURPOSE: This MFR was prepared for the SR 509 project to make a decision on jurisdiction for the roadside ditches and confirm the wetland delineation for the four impacted wetlands. WSDOT applied a new method for evaluation proposed jurisdiction for the 509 Project that was field verified by the Corps.

Impacted Wetlands

1. Four jurisdictional wetlands totaling 30.62 acres will be impacted by this project as follows:

Wetland name	Total acres for wetland	Impacted area by acre
A	16	0.08
B	6.6	0.12
G	7.9	<0.01
M	0.12	0.12

2. The isolated wetland jurisdiction was confirmed by the Corps under a separate action, reference number 200300804, dated 31 July 2003, confirming the 0.11 acre, Wetland N is isolated.

Ditch Jurisdictional Assessment:

3. **509 Ditch Information:** WSDOT provided a packet and drawings with information on evaluating jurisdiction for roadside ditches on 13 June 2005. Supplemental information as requested by the Corps was provided on 26 September 2005. The Corps field verified the jurisdictional information at a site visit conducted on 26 October 2005. The decisions from the site visit for this project are summarized below, and in final plan sheets and photos that are attached.

4. **Connection**: Roadway stormwater runoff and hillside seep runoff enter into the ditches within this project area. These ditches were constructed in uplands for stormwater conveyance. These ditches connect to navigable waters a variety of ways. Water in the ditches may discharge directly into wetlands that outlet to various streams, directly discharge to streams, or enter enclosed stormwater systems in the Cities of Burien, SeaTac, Des Moines, Kent, and Federal Way that discharge to wetlands or streams. The streams that receive water either directly or indirectly from the ditches in the project area include Walker Creek, Miller Creek, Bingaman Creek, and Des Moines Creek. Walker Creek is a tibutary to Miller Creek, which outlets to Puget Sound, a navigable water, and Bingaman Creek is a tributary to Des Moines Creek, which also outlets to Puget Sound. Since stormwater facilities and conveyance pipes do not break jurisdiction on ditches, it was determined that all of the ditches that are connected to the local jurisdiction's stormwater pipes that eventually connect to a navigable water would be considered to maintain the direct connection through the pipes.

5. **Jurisdiction**: WSDOT applied a new method for evaluating ditch jurisdiction (summarized below) and the resulting JD call was field verified on 26 October 2005 by the Corps. The Corps confirmed that ditches J-DR-1-A, J-DR-2-B, and J-DR-7-A had standing/flowing water, or signs of an Ordinary High Water Mark (OHWM) apparent as channel scour within a defined channel, and eventually connected to a navigable water of the U.S. The remaining ditches were walked up-gradient starting at the point of connection to a water of the U.S., and did not show signs of an OHWM within a 100 foot distance from the point of connection, so it was agreed that although these ditches were connected to waters of the U.S., the 100 foot section of the ditch and all ditch areas up-gradient of the connection point were non-jurisdictional due to the lack of OHWM characteristics which defines the Corps jurisdiction.

6. **Other Field Observations**: In review of the project, there were no wetlands or other waters of the U.S. observed up-gradient from the ditch break areas that would be connected via a surface water connection during storm events that had been erroneously missed, or assumed isolated by application of the WSDOT 100-foot break methodology applied to the roadside ditches. It was also agreed that even though the ditch was not jurisdictional due to the lack of an OHWM, if a wetland had occurred up-gradient from the break in the ditch, the wetland still would have been considered jurisdictional because the connection to a water of the U.S. still occurred through the ditch.

7. **WSDOT 100 foot assessment:** WSDOT applied a new method that was reviewed by the Corps for the SR-509 project. WSDOT biologists used the following steps in the assessment of jurisdiction:
    a. Confirmed ditch connection to waters of the U.S. either flowing in open ditches, through closed piped systems, stormwater facilities, or culverts to a navigable water of the U.S., including jurisdictional wetlands;
    b. Defined the points of connection where waters of the U.S. and wetlands were connected to the ditch, and established flow patterns and flow direction for all

ditches on the project from these connection points. The location of the connection point to a water of the U.S. and/or adjacent wetland, was based on flow patterns and ditch gradients;

c. Conducted field observations for project ditches from the point of the connection to the water of the U.S., walked up-gradient from that point within the ditches to observe any signs of OHWM (scour marks, presence of a channel, vegetation that was lying down by flowing water, debris racks, presence of standing or flowing water, or clear area of gravel with no vegetation), and observed the ditch to determine if the three wetland parameters were present.
    i. If the ditch was determined not to be a wetland, and no OHWM was observed within the first 100 feet from the connection point, then this section of ditch, and all areas up-gradient to that same connection point were considered non-jurisdictional;
    ii. If there were signs of wetlands or OHWM at the connection point, these areas of ditch were proposed to the Corps to be jurisdictional, and WSDOT staff would continue to walk the ditches from the connection point until there was no sign of OHWM (a break). After the break, WSDOT staff would continue to walk the ditch until there was a continuous 100 foot break with no OHWM. The additional 100 foot assessment was done in order to determine that there was a true break in jurisdiction, rather than a small area of sheet flow or other masking situation that would not break jurisdiction. If no signs of OHWM were observed from the start of the break through the continuous 100 feet, then that 100 foot section and all ditches up-gradient of the initial break point were considered to be non-jurisdictional;
    iii. In cases where the ditch would flow through a culvert, over a rock lined ditch portion, or into a pipe, it was decided that these conditions would not be considered a break, and the ditch would be considered jurisdictional in these areas if there were signs of an OHWM leading up to these areas;
    iv. For the sections with no OHWM, it was determined and agreed to by the Corps that the water was either infiltrating, evaporating, experiencing vegetative uptake, dispersing, or did not have enough flow to show an OHWM and therefore the jurisdictional portion of the ditch stopped at the initial break, and all areas up-gradient of that point that had the same single connection were determined to be non-jurisdictional. The Corps based this decision on the CFR definition - CFR 328.4(c) (1) "*In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark"*. However it was emphasized that the break in jurisdiction did not break the hydrologic connection for up-gradient wetlands or other waters of the U.S.

Conclusions:

8. Conclusion 1: Four jurisdictional wetlands will be impacted by this project. The area for these four wetlands is 30.62 acres, of which 0.32 acres will be impacted by project construction.

9. Conslusion 2: Three segments of the roadside ditches for the SR 509 project exhibit signs of an OHWM caused by flowing water, and are connected to a navigable water, so are therefore determined jurisdictional waters of the US. The jurisdictional area as field verified totaled 2,087 square feet, or 0.05 acres.

10. Conclusion 3: The break method used by WSDOT to assess jurisdiction in the ditches was appropriate for the SR-509 project. If WSDOT chooses to apply the methodology to future ditch JD calls, the JD package must include rationale as to why the distance used to determine the break, i.e. 100-feet for the SR-509 project, is appropriate based on field observations. For example, the distance of 100-feet was appropriate for the SR-509 project because the ditches were relatively flat with minimal slopes, sandy soils, and in some areas were wide allowing infiltration. For areas with steep sloped ditches or heavier flows, a 100 foot distance may not be enough. For the SR-509 project, there were no up-gradient waters or wetlands that were connected via a surface water connection (ditch) that were erroneously missed or assumed isolated by the application of the WSDOT break methodology applied to roadside ditches. It was agreed that the lack of the OHWM that resulted in the break in jurisdiction did not break the hydrologic connection for up-gradient wetlands or other waters of the U.S.

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